TAF PROFILE REPORT

U.S. (FEDERAL) GOVERNMENT PATENTING

1/1977 - 12/1999



April 2000 U.S. PATENT AND TRADEMARK OFFICE OFFICE FOR PATENT AND TRADMARK INFORMATION / TAF PROGRAM PK3 - Suite 441, WASHINGTON, DC 20231 tel (703) 306-2600 / FAX (703) 306-2737

A TECHNOLOGY ASSESSMENT AND FORECAST REPORT

TAF Profile Report 1/1977 - 12/1999 Explanation of Data

This Technology Assessment and Forecast (TAF) report profiles patent activity for all U.S. patent documents (design, plant, reissue, and utility patents, defensive publications, and statutory invention registrations) granted between January 1, 1977 and December 31, 1999 for which ownership was assigned to a Federal organization at the time of grant. The source of the data used for this report is the TAF data base maintained by the Office of Patent and Trademark Information.

Data Distribution By Date of Grant and By Date of Application

Parts A1 and A2

Part A1 distributes patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes grant data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data in the "Pre 1986" column corresponds to the period January 1, 1977 through December 31, 1985.

Part B

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1977. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 40% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a patent and the issuing of the patent (i.e., a patent's "pendency") is now about 24 months, the patented application data for the most recent years are incomplete.* This is because a significant number of the applications filed in the most recent years, which will ultimately become patents, were still pending in **December 1999**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity, since such fluctuations would for the most part be immune from changes in PTO processing such as occurred in 1986 when the PTO issued fewer patents than would

normally have been expected due to a lack of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of patent grant. Such variation in pendency is determined by many factors, including PTO workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

Parts of the Report

Parts A1 and A2 present tables which show, by number and percent, the patent activity. Part A1 presents data by year of patent grant ("Patents Granted by Date of Patent Grant"). Part A2 redistributes grant data by year of patent application ("Patents Granted by Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

Information on **patent ownership** reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for Foreign Government patents.

Part B is a ranked listing of Federal organizations which have received 1 or more U.S. patents since 1977. Information on patent ownership reflects ownership at the time of patent grant (see explanation for Parts A1 and A2, above). Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

^{*} As of December 31, 1999, UTILITY patent application data (most issued patent documents are utility patents) were approximately 79% complete for patent applications filed in 1997, and 21% complete for applications filed in 1998. They are essentially complete for applications filed prior to 1997.

Part A1 Patent Grants as Distributed By Year of Patent Grant

U.S. FEDERAL GOVERNMENT (UTILITY, DESIGN, PLANT, REISSUE PATENTS, STATUTORY INVENTION REGISTRATIONS, DEFENSIVE PUBLICATIONS)
Page A1- 1

		Patents	Granted	By Da	ate Of	Patent	Grant	(Granted:	Jan 01,	1977 -	Dec 31,	1999)					
							N	UMBER OF	PATENTS								
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	
Total	10534	1145	1143	848	978	1064	1272	1225	1234	1310	1083	960	974	1039	999	25808	
U.S. Origin	10462	1132	1130	841	968	1059	1268	1218	1226	1299	1076	955	963	1030	995	25622	
Foreign Origin	72	13	13	7	10	5	4	7	8	11	7	5	11	9	4	186	
UNITED KINGDOM	24		2			1				1				1	1	30	
CANADA	16	1	1			1				1	2				1	23	
GERMANY	5			1	3	2	1	2		1		3	2	3		23	
ISRAEL	5	1	3	2			1	1	1	1	1	1	2			19	
INDIA	7	2	3	2	1		2		2							19	
JAPAN	2		2	1	1			1		3	2		1	2		15	
GREECE	1	2	2		2											7	
SWITZERLAND	2								1	2					1	6	
FRANCE	2				1	1			-	1					_	5	
AUSTRALIA	_	2			1	_			1	_	1					5	
ITALY		_			_				2		_		2	1		5	
TURKEY		4							~				-	-		4	
BRAZIL		•									1		1	1		3	
NORWAY	2												_			2	
CHINA P.REP.	2	1			1											2	
TAIWAN		_						1					1			2	
EGYPT	2															2	
FINLAND	1													1		2	
SWEDEN	1													_			
				1				1								1 1	
POLAND	1							1									
NETHERLANDS	1															1	
TANZANIA								1	_							1	
BULGARIA	_								1							1	
U.S.S.R.	1									_						1	
YUGOSLAVIA										1						1	
VENEZUELA	1															1	
ARAB EMIRATES												1				1	
BELGIUM													1			1	
JORDAN													1			1	
SOUTH KOREA															1	1	
Ownership:																	
U.S. Corporations				0.15				1005	1004			0.50				0	
U.S. Government	10534	1145	1143	848	978	1064	1272	1225	1234	1310	1083	960	974	1039	999	25808	
U.S. Individuals																0	
Foreign Corporations																0	
Foreign Government																0	
Foreign Individuals																0	

Page A1- 2

U.S. FEDERAL GOVERNMENT (UTILITY, DESIGN, PLANT, REISSUE PATENTS, STATUTORY INVENTION REGISTRATIONS, DEFENSIVE PUBLICATIONS)

Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 1999) Pre 1986 Total Total U.S. Origin Foreign Origin UNITED KINGDOM CANADA GERMANY ISRAEL INDIA JAPAN GREECE SWITZERLAND FRANCE AUSTRALIA ITALY TURKEY BRAZIL NORWAY CHINA P.REP. TAIWAN EGYPT FINLAND SWEDEN POLAND NETHERLANDS TANZANIA BULGARIA U.S.S.R. YUGOSLAVIA VENEZUELA ARAB EMIRATES BELGIUM JORDAN SOUTH KOREA Ownership: U.S. Corporations U.S. Government U.S. Individuals Foreign Corporations Foreign Government Foreign Individuals

Part A2 Patent Grants as Distributed By Year of Patent Application

Page A2- 1

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U.S. FEDERAL GOVERNMENT (UTILITY, DESIGN, PLANT, REISSUE PATENTS, STATUTORY INVENTION REGISTRATIONS, DEFENSIVE PUBLICATIONS)

Foreign Government Foreign Individuals

Pre 1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 Total																	
TOTAL 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 2808 U.S. Origin 12980 890 771 971 1093 1255 1230 1269 1238 1058 1110 846 717 186 8 25622 FORCEIGN CEIGIN 96 5 10 5 7 9 11 9 4 11 7 9 3 186 8 25622 UNITED KINGTON 24 2 2 1 1																	
UNITED KINGDOM 24 2 1 1 1 1 1 1 1 1 30 OREMANY 5 2 2 3 3 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1		Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
Foreign Origin	Total	13076	895	781	976	1100	1264	1241	1278	1242	1069	1117	855	720	186	8	25808
UNITED KINDDOM 24 2 2 3 3 1 1 1 1 1 1 1 3 1 3 1 3 3 3 3 3	U.S. Origin	12980	890	771	971	1093	1255	1230	1269	1238	1058	1110	846	717	186	8	25622
CREMENTY 5	Foreign Origin	96	5	10	5	7	9	11	9	4	11	7	9	3			186
CREMENTY 5	INITEED VINCEON	24	2			1			1				1	1			30
CANADA			2	•	•						_			_			
I SERREL				4	2					1		1	3				
INDICA 12 1 1 1 2 2 2				_		1		1	2	_		_	_				
AJAPN 3 2 1 2 2 1 2 1 2 1 1 1 1 5 6 6 6 6 6 1 1 1 1 1 1 1 1 1 1										1	1	1	1				
GREECE 5 2				1		1	2										
SMITZERLAND 2			2		1			2	2	1	2		1	1			
FRANCE 2 1 1 1	GREECE			2													
AUSTRALIA 2 1 1 1 1 1 2 5 5 5 5 7 20 8 5 8 7 8 9 8 1 9 8 1 10 1 2 5 5 8 2 8 8 2 8 2 8 9 8 2 8 2	SWITZERLAND	2			1			1	1			1					6
ITALY	FRANCE	2		1	1					1							5
TURKEY 4	AUSTRALIA	2		1				1	1								5
TURKEY 4 BRAZIL	ITALY						1	1			1	2					5
BRAZIL CHINA P. REPP. 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	TURKEY	4															4
CHINA P.REP. 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2											1	1	1				
NORWAY 2		1		1							_	_	_				
EGYPT 2																	
TAIWAN 1																	
FINLAND 1		2					_				_						
SWEDEN 1 BULGARIA 1 U.S. S.R. 1 POLAND 1 NETHERLANDS 1 TANZANIA 1 YUGOSLAVIA 1 BELGIUM 1 VENEZUELA 1 VENEZUELA 1 JORDAN 1 SOUTH KOREA 1 U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808							1				1						
BULGARIA 1 U.S.S.R. 1 U.S.S.R. 1 POLAND 1 NETHERLANDS 1 TANZANIA 1 YUGOSLAVIA BELGIUM 1 VENEZUELA 1 VENEZUELA 1 JORDAN 1 SOUTH KOREA 1 U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808		1											1				
U.S.S.R. 1 POLAND 1 NETHERLANDS 1 TANZANIA 1 YUGOSLAVIA 1 EBELGIUM 1 VENEZUELA 1 ARAB EMIRATES 1 JORDAN 1 SOUTH KOREA 1 U.S. Corporations U.S. Government 1306 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808				1													
POLAND 1 NETHERLANDS 1 TANZANIA 1 YUGOSLAVIA 1 BELGIUM 1 VENEZUELA 1 ARAB EMIRATES 1 JORDAN 1 SOUTH KOREA 1 Ownership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808						1											
NETHERLANDS 1 TANZANIA 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	U.S.S.R.	1															1
TANZANIA 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	POLAND						1										1
YUGOSLAVIA 1 BELGIUM 1 VENEZUELA 1 ARAB EMIRATES 1 JORDAN 1 SOUTH KOREA 1 Ownership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808	NETHERLANDS	1															1
YUGOSLAVIA 1 BELGIUM 1 VENEZUELA 1 ARAB EMIRATES 1 JORDAN 1 SOUTH KOREA 1 Ownership: U.S. Corporations U.S. Government 13076 895 781 976 110 1264 1241 1278 1242 1069 1117 855 720 186 8 25808	TANZANIA							1									1
BELGIUM VENEZUELA 1 ARAB EMIRATES JORDAN SOUTH KOREA Comnership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1211 1278 1242 1069 1117 855 720 186 8 25808	YUGOSLAVIA																1
VENEZUELA 1 ARAB EMIRATES JORDAN SOUTH KOREA 1 1 Connership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808								•			1						
ARAB EMIRATES JORDAN SOUTH KOREA 1 1 1 Comnership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808		1									-						
JORDAN SOUTH KOREA 1 1 1 Cownership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808		_										1					
SOUTH KOREA 1 1 Ownership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808												_	1				
Ownership: U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808													1	_			
U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808	SOUTH KOREA													1			1
U.S. Corporations U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808																	
U.S. Government 13076 895 781 976 1100 1264 1241 1278 1242 1069 1117 855 720 186 8 25808																	
U.S. Individuals	U.S. Government	13076	895	781	976	1100	1264	1241	1278	1242	1069	1117	855	720	186	8	25808
	U.S. Individuals																C
	Foreign Corporations																0
Foreign Corporations																	

U.S. FEDERAL GOVERNMENT (UTILITY, DESIGN, PLANT, REISSUE PATENTS, STATUTORY INVENTION REGISTRATIONS, DEFENSIVE PUBLICATIONS)
Page A2- 2

J.S. FEDERAL GOVERNMENT	(01111111, 1	JEDIGN, I	FLIANI, KI	SIDDOE FA	AIBNID,	SIAIUIOK	I TMAEMIT	ON REGIS	TRAITONS	, DEFENS	TAE LODE	ICALIONS	, ,		rage	. A2- 2	
	Pat	tents Gr	ranted H	By Date	Of Pat	tent App	plication	ı (Grant	ed: Jan	01, 1977	- Dec 3	1, 1999)					
						_											
							PERCENT O										
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
U.S. Origin	99	99	99	99	99	99	99	99	100	99	99	99	100	100	100	99	
Foreign Origin	1	1	1	1	1	1	1	1		1	1	1				1	
UNITED KINGDOM																0	
GERMANY																0	
CANADA																0	
ISRAEL																0	
INDIA																0	
JAPAN																0	
GREECE																0	
SWITZERLAND																0	
FRANCE																0	
AUSTRALIA																0	
ITALY																0	
TURKEY																0	
BRAZIL																0	
CHINA P.REP.																0	
NORWAY																0	
EGYPT																0	
TAIWAN																0	
FINLAND																0	
SWEDEN																0	
BULGARIA																0	
U.S.S.R.																0	
POLAND																0	
NETHERLANDS																0	
TANZANIA																0	
YUGOSLAVIA																0	
BELGIUM																0	
VENEZUELA																0	
ARAB EMIRATES																0	
JORDAN																0	
SOUTH KOREA																0	
Ownership:																	
U.S. Corporations																0	
U.S. Government	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
U.S. Individuals																0	
Foreign Comments																^	
Foreign Corporations																0	
Foreign Government																0	

Foreign Individuals

Part B

Ranked Listing of Organizations with Patent Grants
As Distributed By Year of Patent Grant
and As Distributed By Year of Patent Application

Page B - 1

U.S. FEDERAL GOVERNMENT (UTILITY, DESIGN, PLANT, REISSUE PATENTS, STATUTORY INVENTION REGISTRATIONS, DEFENSIVE PUBLICATIONS)

Patents By Year of Application:

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Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31	, 1999)	F	Ranked Li	st of Or	ganizati	ons with	1 or 1	More Pat	ents	-
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
UNITED STATES OF AMERICA, NAVY																	
Patents By Year of Grant:	3013	233	206	126	145	276	396	314	360	395	347	294	299	345	358	7107	
Patents By Year of Application:	3791	119	108	173	214	368	331	363	353	304	329	304	271	75	4	7107	
UNITED STATES OF AMERICA, ARMY																	
Patents By Year of Grant:	2073	256	254	152	200	170	201	168	184	203	191	155	170	166	142	4685	
Patents By Year of Application:	2528	193	144	157	197	171	172	214	205	185	191	169	117	42	0	4685	
UNITED STATES OF AMERICA, DEPARTMENT	OF ENERG	Y															
Patents By Year of Grant:	1962	258	253	240	233	240	215	250	182	205	119	71	69	62	53	4412	
Patents By Year of Application:	2476	223	187	216	247	229	227	177	165	78	69	62	44	12	0	4412	
UNITED STATES OF AMERICA, AIR FORCE																	
Patents By Year of Grant:	1241	187	204	136	157	114	149	145	139	138	86	104	94	84	91	3069	
Patents By Year of Application:	1621	162	131	133	114	154	135	131	111	97	101	87	66	25	1	3069	
UNITED STATES OF AMERICA, NATIONAL AE	RONAUTIC	S AND SP	ACE ADMI	NISTRATI	ON												
Patents By Year of Grant:	921	93	122	93	127	128	151	151	166	160	122	104	97	95	93	2623	
Patents By Year of Application:	1110	93	96	145	139	137	170	159	167	123	108	87	77	11	1	2623	
UNITED STATES OF AMERICA, HEALTH & HUMAN SERVICES																	
Patents By Year of Grant:	243	28	34	27	34	38	50	76	85	108	97	117	150	169	139	1395	
Patents By Year of Application:	314	34	37	56	67	81	92	124	121	169	185	56	55	4	0	1395	
UNITED STATES OF AMERICA, DEPARTMENT	OF AGRIC	ULTURE															
Patents By Year of Grant:	493	34	30	35	43	49	47	55	54	38	49	41	49	75	71	1163	
Patents By Year of Application:	558	34	39	44	58	57	58	38	45	47	64	63	46	11	1	1163	
UNITED STATES OF AMERICA, DEPARTMENT	OF THE I	NTERIOR															
Patents By Year of Grant:	288	13	11	10	10	8	18	20	10	10	14	17	6	3	5	443	
Patents By Year of Application:	308	11	11	7	12	20	16	9	12	18	10	3	5	0	1	443	
UNITED STATES OF AMERICA, DEPARTMENT	OF COMME	RCE															
Patents By Year of Grant:	57	7	13	10	5	18	8	18	27	34	26	23	18	15	20	299	
Patents By Year of Application:	71	10	10	11	16	15	22	42	30	24	22	12	12	2	0	299	
UNITED STATES OF AMERICA																	
Patents By Year of Grant:	66	13	6	7	8	7	16	18	8	5	14	16	9	8	8	209	
Patents By Year of Application:	90	4	4	13	17	17	7	9	13	9	19	1	5	1	0	209	
UNITED STATES OF AMERICA, TENNESSEE V																	
Patents By Year of Grant:	63	13	6	8	6	9	10	5	1	4	8	3	3	3	7	149	
		_		•		_	_	•	•	•		_		_	•		

U.S. FEDERAL GOVERNMENT (UTILITY, DESIGN, PLANT, REISSUE PATENTS, STATUTORY INVENTION REGISTRATIONS, DEFENSIVE PUBLICATIONS) Page B - 2

Organizational Patenting				(Grante	d: Jan 0	1, 1977	- Dec 31	, 1999)	R	anked Li	st of Or	ganizati	ons with	1 or	More Pat	ents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
UNITED STATES OF AMERICA, ENVIRONMENT	AL PROTE	CTION AG	ENCY														
Patents By Year of Grant:	38	2	2	1	4	4	6	2	8	4	5	8	7	3	4	98	
Patents By Year of Application:	41	2	2	6	2	6	6	4	6	6	12	1	4	0	0	98	
UNITED STATES OF AMERICA, DIRECTOR NA	TTONAT.	יבריווסדייע	ACENCY														
Patents By Year of Grant:	17	3	1	3	5	3	2	3	8	4	3	3	1	8	5	69	
Patents By Year of Application:	26	3	2	5	4	2	1	5	3	4	2	2	9	1	0	69	
UNITED STATES OF AMERICA, DEPARTMENT	OF TRANS	PORTATIO	N														
Patents By Year of Grant:	18	2	1	0	0	0	2	0	2	1	0	0	1	3	2	32	
Patents By Year of Application:	21	0	0	1	2	1	1	0	0	0	0	2	4	0	0	32	
UNITED STATES OF AMERICA, FEDERAL COMMUNICATIONS COMMISSION																	
Patents By Year of Grant:	15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16	
Patents By Year of Application:	15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	16	
UNITED STATES OF AMERICA, VETERANS AD	MINISTRA	TION															
Patents By Year of Grant:	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
Patents By Year of Application:	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
UNITED STATES OF AMERICA POSTAL SERVICE																	
Patents By Year of Grant:	CE 4	1	0	0	0	0	1	0	0	1	0	1	1	0	0	9	
Patents By Year of Application:	5	0	0	1	0	0	0	1	1	0	0	1	0	0	0	9	
1400100 27 1041 01 1-55-104010111	-		· ·	_	•			_	_	·	•	_		•		-	
UNITED STATES OF AMERICA, TREASURY																	
Patents By Year of Grant:	6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	7	
Patents By Year of Application:	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	7	
UNITED STATES OF AMERICA, LIBRARY OF				•							_	_	•				
Patents By Year of Grant: Patents By Year of Application:	2	0	0	0	0	0	0	0	0 1	0	1	1	0	0	0	4	
racence by rear or appricacion:	2	U	U	U	U	U	U	U	_	_	U	U	U	U	U	-	
UNITED STATES OF AMERICA, ATTORNEY GE	NERAL																
Patents By Year of Grant:	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Patents By Year of Application:	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
UNITED STATES OF AMERICA, DEPARTMENT																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Patents By Year of Application:	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
UNITED STATES OF AMERICA, FEDERAL RES	ERVE BAN	K OF BOS	TON														
Patents By Year of Grant:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Patents By Year of Application:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

Page B - 3

U.S. FEDERAL GOVERNMENT (UTILITY, DESIGN, PLANT, REISSUE PATENTS, STATUTORY INVENTION REGISTRATIONS, DEFENSIVE PUBLICATIONS)

Organizational Patenting				(Grante	d: Jan (1977	- Dec 31	, 1999)		Ranked Li	st of Or	ganizati	ons with	1 or	More Pat	ents	
	Pre																
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL	
UNITED STATES OF AMERICA, FEDERAL RES	ERVE BAN	K OF RIC	HMOND														
Patents By Year of Grant:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Patents By Year of Application:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
UNITED STATES OF AMERICA, FEDERAL TRAI	DE COMMI	SSION															
Patents By Year of Grant:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Patents By Year of Application:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
UNITED STATES OF AMERICA, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
UNITED STATES OF AMERICA, SMALL BUSING	ESS ADMI	NISTRATI	ON														
Patents By Year of Grant:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Patents By Year of Application:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Other Organizations (0)																	
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	